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SUBJECT: The Omsk Petroleum Refinery

e. Photography Used - All available photography covering this plant area was utilized in this study. From this material, [ ] overflight and [ ] satellite missions were selected on the basis of having good quality photography. [ ]

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[ ] The attached graphics have been arranged in a chronological order. Figures 6 and 7, the most recent and best quality photography available over the refinery area, contains all of the pertinent data including annotations and construction change that were evident within the [ ] period. Detail concerning the changes, additions and identification of changes that have occurred during this period is given in chronological order in the following paragraphs.

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3. The refinery appeared to be in mid-stages of construction [ ] several of the refinery units were completed and in operation (See Figure 2). About 50-70% of the refinery appeared to be completed at this time. A large number of other units were in early-to-mid stages of construction, this included about half of the distillation and cracking units. The next photographic mission to cover this target was [ ] Mission [ ] (See Figure 3). The major changes that occurred during this period are outlined on an overlay to the above mentioned graphic, the key to the annotations is as follows:

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- (1) Water treatment and pumping facilities - several buildings and ponds under construction [ ] have been completed and others have been newly constructed.
- (2) New reservoir approximately 1,800' long was added.
- (3) New crude oil storage addition including cylindrical tanks and rectangular reservoirs.
- (4) New construction area - possible horizontal (lay down-type) tanks under construction.
- (5) Distillation units, compressor building and storage tanks - all newly constructed and probably completed.
- (6) New unidentified construction area - possibly an associated industry or testing area.
- (7) New construction area - several large probable storage buildings under construction.
- (8) Three large cracking units and supporting equipment - complete and probably operating - this area was in very early stages of construction [ ]

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IB No. 216/64  
23 July 1964  
Copy No. /

MEMORANDUM FOR: Chief, Resources Division, ORR

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ATTENTION :   
THROUGH : Chief, Requirements Branch, Reconnaissance Group, CGS  
FROM : Chief, CIA/PID (NPIC)  
SUBJECT : The Omsk Petroleum Refinery  
REFERENCES : (1) ORR Requirement No. C-RR3-80,507  
(2) CIA/PID Project No. C 1189/63

1. This memorandum is forwarded in answer to the above mentioned requirement which requested an analysis and a comparative study of the petroleum refinery located near Omsk, USSR.

2. Information concerning the refinery as requested is as follows:

a. Location - The refinery is located along the right bank of the Irtysh River just northwest of the city of Omsk at geographic coordinates 55 04N - 73 14E. The refinery is located on the south side of the transiberian pipeline. Crude oil processed at the refinery is probably served directly to the refinery by this pipeline.

b. Areal Extent - The refinery area is rectangular in shape measuring approximately 3.6 nm x 2.5 nm (approx. 330,000,000 sq. ft.), and it is oriented WSW/ENE. The main production and refining area measures 1.6 nm x 1.3 nm which includes 80,000,000 sq. ft. of area.

c. Construction Status - The overall appearance of the refinery, and judging from the rate of change that has taken place the refinery and its associated facilities appears to be reaching final stages of construction. Although the plant appears to be active and operating, nevertheless, construction on additional units was active throughout the period. There is still sufficient room for expansion and it appears as if additional units and related industries will be located in close proximity to this large refinery.

d. Level of Activity - The refinery, and associated activity, appeared to be in operation on all photography used in this study. The power plant, cooling towers, flare towers, large numbers of railroad rolling stock in the yard just outside of the southeast corner of the refinery area, and several refining and processing units showed evidence of some level of operation.

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(9) Several cylindrical storage tanks

(10) New construction area - unidentified grid pattern construction activity - possibly a storage area in early stages of construction

25X1 4. Although there has not been any major changes in the refinery area during the period [redacted] nevertheless a few minor changes have taken place. These changes are (See Figures 4-6, the overlays to figure 6 contain the changes and the annotations to the units as identified):

a. Overlay I

- 25X1 (1) An unidentified rectangular area first appeared on [redacted] 25X1 [redacted] photography. This area appears to be an isolated storage and shipping area. It is rail served and buried pipelines connect it to the refinery.
- 25X1 (2) New apartment project developed [redacted] 25X1 [redacted]
- 25X1 (3) Probable warehouse area under construction [redacted] 25X1 This area did not look completed in [redacted] 25X1
- 25X1 (4) Probable storage area, several buildings added between [redacted] 25X1 The area will be road and rail served.
- 25X1 (5) New rail spur under construction. This spur was under construction on [redacted] 25X1 photography, and it probably will serve all of the new construction on the north side of the refinery.
- 25X1 (6) New ditch, probably for a buried pipeline developed [redacted] 25X1 This appeared covered in [redacted]
- 25X1 (7) Probable lube oil refining unit - This unit was barely visible [redacted] 25X1 and there was a light tone, possibly construction scarring, in the northern half of the area. If this unit was under construction at this time, it now appears completed on [redacted] 25X1 photography.
- 25X1 (8) An unidentified tower-like structure located near two rail spurs under construction. This area appeared to be in early stages of construction [redacted] 25X1 and it was either completed or in final stages [redacted] 25X1

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- 25X1
- (9) Several small buildings added to the petrochemical/synthetic rubber plant [redacted]
- (10) Possible area of extension for the petrochemical/synthetic rubber plant. This area appears fenced and scarring within indicates construction of roads/buried pipelines was underway on photography [redacted]
- 25X1
- (11) An unidentified area, separated from the refinery area, yet tied to it by trackage. The area is fenced and there is a fence separation within the compound, dividing the area into two sections. It looks like a possible storage area.
- b. Overlay II - Plant analysis of the refinery and associated facilities is as follows (See Figure 6, Overlay 2 for corresponding annotation numbers):
- (1) & (22) - Probable valve housing areas service the crude oil storage facilities directly from the Transiberian Pipeline.
- (2) - Probable pump housing area. This is located along a lineal scarring, probably buried pipeline, which connects the valve housing area to the crude storage area.
- (3) Water treatment and pumping facilities. These facilities are located between the refinery proper and the water reservoir. The water reservoir is approximately 12,000 feet long and 1,500 feet wide. The probable intake and outlet area is located between the reservoir and the river.
- (4) Crude oil storage area, reservoir-type. This area is probably not completed as yet. There is sufficient room for addition of more storage facilities or expansion of the refinery proper. There are eight probable cooling ponds located in the south central portion of the area. The activity located on the east of the ponds, is probably additional cooling ponds under construction.
- (5) Possible heat-treating unit. The isolated location of this unit from the refinery proper and its close association with the storage facilities, indicates this unit is possibly that of treating the crude and not distilling or refining.
- (6) Probable warehouse or associated industrial plant under construction.
- (7) Flare Tower - This is one of three flare towers observed

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at the refinery. The other two are located near the fringes of the refinery complex: one is located on the east, near the petrochemical/synthetic rubber plant; the other is located on the west near the open reservoir crude storage area. Atmospheric emission was visible from this unit on all available good-quality photography.

- (8) Distillation units - Two units and associated support equipment and several liquid storage tanks.
- (9) Probable compressor buildings - approximately ten buildings on-line between the storage area and processing lines.
- (10) New unidentified construction area with approximately twenty-four buildings, two gantry cranes and two large excavations - rail and road served. This is the only area with the refinery complex to show evidence of any active construction activity, of any large degree, during the [REDACTED] period.
- (11) Cooling towers and spray ponds - There are eight banks of induced draft type cooling towers and several spray ponds. Five large natural draft cooling towers are associated with the thermal power plant (annotation 19).
- (12) Two probable fractionating units with associated activity located between the crude storage area and the cat-crackers.
- (13) Oil storage area consisting of 217 storage tanks of various sizes. Some of these receptacles are probably used to hold completed products as well as crude oil. There was no apparent change or addition to this area [REDACTED] The area is served by road, rail and pipeline.
- (14) A probable vapor recovery unit located generally in the center of the cat-cracking area.
- (15) Gasoline recovery area with probable polymerization and alkylation units. The plant administration area is located along the south edge of the gasoline recovery area.

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- (16) Cracking units - There are seven cracking units, two pairs of a similar unit located along the cooling area and three larger units are located to the east of these units.
- (17) Distillation Units - This area contains four similar units with associated activity and storage tanks.
- (18) Rail car loading platforms - This area appears active on all available photography, having several units of tank cars probably engaged in loading operations.
- 25X1 (19) Steam and Power Plant - This plant has almost doubled in size [redacted] The expansion has taken place on the east end of the plant. Three cooling towers were added during this period to increase the number to five. The plant provides electric power and steam.
- (20) Lube Oil Refining Area - This area contains approximately 10 separate refining units including dehydration and lube oil stills and approximately 125 storage tanks of various sizes.
- (21) Probable Vapor Recovery Area - located between the lube oil area and the crude storage area, contains four similar units with associated activity.
- (22) Probable valve housing located at the point of origin between the main (Trans-siberian pipeline) trunk line and subsidiary line leading into the crude oil storage area.
- (23) New Construction Area - Large grid shaped area containing two storage tanks, pit, linear scars (probable ditching), and associated ditching (probably pipelines) loading into the area from the direction of the refinery and the Trans-siberian Pipeline. This area has shown very little change during the [redacted] period, it was cloud covered on the [redacted] coverage.
- 25X1 (24) Construction Material Area - This area contained the concrete batching plant, aggregate storage area and carpenter shops. Several buildings that were present on earlier photography have been dismantled.
- 25X1 (25) Probable Packaging Plant - This area is closely associated with the lube oil facilities and is probably engaged in packaging final products for shipment. There are approximately twelve buildings associated with this area and there is a large number of probable drums in open storage within the area.

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- (26) Railroad Yard - A large yard serving the refinery and associated industries. The yard showed signs of light to moderate traffic on all photography during the [ ] period.

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- (27) Petrochemical/Synthetic Rubber Plant.- This plant has reached final stages of construction since [ ]. All of the units appear complete and they are probably operational. There is an isolated storage area with thirteen storage vessels located in the north corner of the plant area. The plant has undergone very few changes since [ ].

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5. The best and most recent photo coverage over the refinery and associated industries is [ ] Mission [ ] (See Figure 7). Although there was scattered clouds over portions of the refinery most of the refining and storage units were visible in the cloud free areas. The major visible changes that have occurred during the [ ] period are as follows (See Figure 7 for corresponding annotation numbers):

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- (1) Area of New Construction - This area is located adjacent to the petrochemical/synthetic rubber plant. There was only a fence and a few small indicators to suggest future expansion on the [ ] coverage. Since then, a large new area has developed within this fenced area, which includes several buildings in various stages of construction and ditch scarring. The facility is connected to a separate secured area located approximately one mile northeast by road and possible buried pipeline (See Figure 6 also).

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- (2) Possible refining area in very early stages of construction.. This area was covered by smoke from the power plant in [ ] coverage the ground scarring, pipe construction and storage tanks within the area suggest a possible expansion of the gasoline recovery area.

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- (3) Area of new construction located between the water cooling area, cracking area, and the gasoline recovery area. Although the construction is new, it appears as if when completed, this new construction will probably reveal expansion related to all three areas and not necessarily to just one. All of the construction activity in this area has developed [ ]

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- (4) Unidentified Processing Unit - This unit appeared to be in mid-to-final stages of construction [redacted] photography it appeared complete and operational. Pipelines connect this unit to various areas in the refinery as well as the unidentified area on the north fringe of the refinery (See Figure 7 Annotation 8). 25X1
- (5) Four new storage tanks added [redacted] 25X1
- (6) Area of Unidentified New Construction - This area was in very early stages of construction [redacted] photography fourteen lay-down tanks, two new processing units, ditching, and some associated buildings were under construction. A steam and possible gas line, running from the center of the refinery proper, passes along the northwest edge to an area containing two storage tanks and a flare tower. 25X1
- (7) Additions to the Small Isolated Storage Area Include - Three buildings, located adjacent to south side of storage area; new construction located just south of the storage area which may be associated with the flare tower. Atmospheric emissions were evident from this tower [redacted]. The tower was not active nor in use [redacted]. 25X1
- (8) Area of New Construction - This area was 50% cloud covered on [redacted] photography, however, the cloud free portion did reveal some changes [redacted]. These are - two large pits or excavations, two gantry cranes, one large building, approximately fifteen small buildings in various stages of construction. 25X1

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6. The photo analyst assigned to this requirement [redacted] may be contacted [redacted] should any question arise concerning this memorandum. This memorandum and attachments completes this requirement. 25X1

ENCLOSURES:

- 1 Annotated Map (CIA/PID/IB-P-675/64)  
6 Annotated Photos (CIA/PID/IB-P-676/64 thru P-679/64) and (P-972/64 and P-973/64) w/overlays

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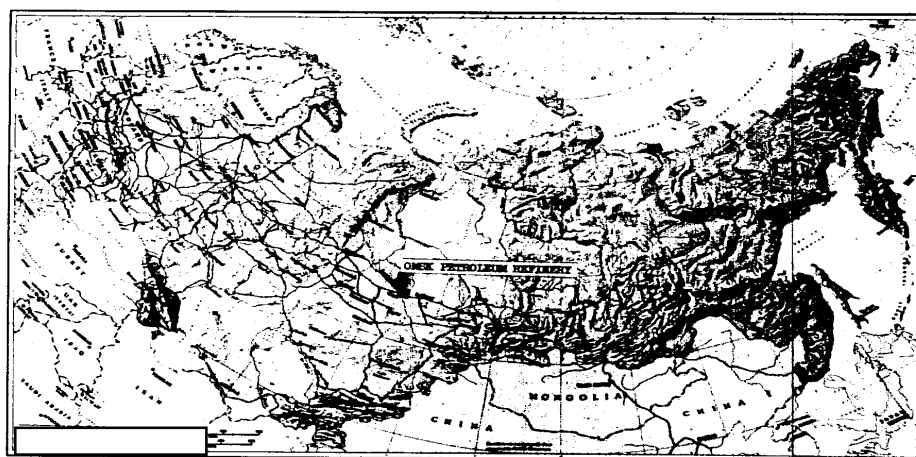


FIGURE 1. LOCATOR MAP

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CIA/PID/IB-P-670/64

FIGURE 5 OMEQ PETROLEUM REFINERY.

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